

5,899,222

5

diameter of the ball valve 58. This ball valve 58 has a first orientation wherein the ball valve 58 prevents the flow of fluid within the water passage 54, and a second orientation wherein fluid is permitted to flow through the fluid passage 62 of the ball valve 58 and within the water passage 54.

Control means are included for use in controlling the operation of the ball valve 58. More specifically, as illustrated in FIG. 5, a pair of rotatable control rods 64 extend along the upper and lower extent of the hydrant housing 42. Each of the control rods 64 is interconnected to a system of bevel gears 66. Thus rotation of the control rods 64 in a first sense functions to bring the ball valve 58 into the first orientation, while rotation of the control rods 64 in a second sense functioning to bring the ball valve 58 into a second orientation.

The fire hydrant 40 embodiment depicted in FIG. 3 works similar to the embodiment of FIG. 5. However, in this secondary hydrant embodiment the ball valve 58 is located above ground and above the base flange 48. Additionally, the secondary hydrant embodiment does not employ the flexible fluid couplings depicted in FIG. 5. The hydrant of FIG. 3 can also employ a break point 70 as described hereinabove in association with FIG. 5.

FIG. 7 illustrates a hydrant which can employ either the above ground or below ground ball valve. The hydrant of FIG. 7, however, employs a centrally disposed control rod. This rod functions identically to the control rods of the previous two embodiments, however, is centrally positioned. Lastly, FIG. 8 illustrates a flexible covering 74, with associated rigid clamps 76. This flexible covering is adapted to be positioned over a hydrant in the event it is hit by a vehicle. Specifically, if the upper and lower portion of the hydrant housing have not become separated, the combination of the covering 74 and clamps 76 can be positioned around the hydrant to keep it together.

As to the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as being new and desired to be protected by Letters Patent of the United States is as follows:

1. A new and improved ball valve assembly for use in combination with a ground mounted fire hydrant, the assembly comprising in combination:

6

a fire hydrant housing having a lower extent, an upper extent and an intermediate extent therebetween, a base flange secured intermediate the upper and lower extents for use in securing the hydrant to the ground such that the lower extent extends into the ground, three outlets formed within the upper extent of the hydrant;

a water passage formed within the lower extent of the hydrant housing, three flexible fluid couplings, each of the fluid couplings interconnecting the water passage to one of the three outlets formed within the upper extent of the housing;

a ball valve rotatably secured within the water passage a fluid passage formed within a diameter of the ball valve, the ball valve having a first orientation wherein the ball valve prevents the flow of fluid within the water passage, and a second orientation wherein fluid is permitted to flow through the fluid passage of the ball valve and within the water passage;

a pair of rotatable control rods extending along the upper and lower extent of the hydrant housing, each of the control rods interconnected to a bevel gearing for use in controlling the orientation of the ball valve, thus, rotation of the control rods in a first sense functioning to bring the ball valve into the first orientation, while rotation of the control rods in a second sense functioning to bring the ball valve into a second orientation.

2. A new and improved ball valve assembly for use in combination with a ground mounted fire hydrant, the assembly comprising in combination:

a fire hydrant housing having a lower extent, an upper extent and an intermediate extent therebetween, a base flange secured intermediate the upper and lower extents for use in securing the hydrant to the ground such that the lower extent extends into the ground, a number of outlets formed within the upper extent of the hydrant;

a water passage formed within the lower extent of the hydrant housing, a number of flexible fluid couplings, each of the fluid couplings interconnecting the water passage to one of the outlets formed within the upper extent of the housing;

a ball valve rotatably secured within the water passage, a fluid passage formed within a diameter of the ball valve, the ball valve having a first orientation wherein the ball valve prevents the flow of fluid within the water passage, and a second orientation wherein fluid is permitted to flow through the fluid passage of the ball valve and within the water passage;

control means for effecting the orientation of the ball valve.

3. The hydrant as described in claim 2 wherein the control means includes:

a pair of rotatable control rods extending along the upper and lower extent of the hydrant housing, the control rods being interconnected to the ball valve such that rotation of the control rods in a first sense functioning to bring the ball valve into the first orientation, while rotation of the control rods in a second sense functioning to bring the ball valve into a second orientation.

\* \* \* \* \*

Sub. E1